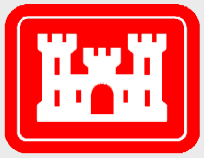
Passive Soil Gas Surveys at SWMUs 1 and 25

Deseret Chemical Depot

David Shank, Jr., P.G.

Kleinfelder, SLC



K L E I N F E L D E R

>EXPECT MORE

Presentation Outline

- Regulatory Framework
- Background of SWMUs 1 & 25
- Special Considerations
- Technical Approach

Regulatory Framework

RCRA Corrective Action Program

1. RCRA Facility Investigation (Includes Risk Assessment)
2. Corrective Measures Studies
3. Corrective Action
4. Site Closure

RCRA Facility Investigations

Phase 1 - Completed in 1993

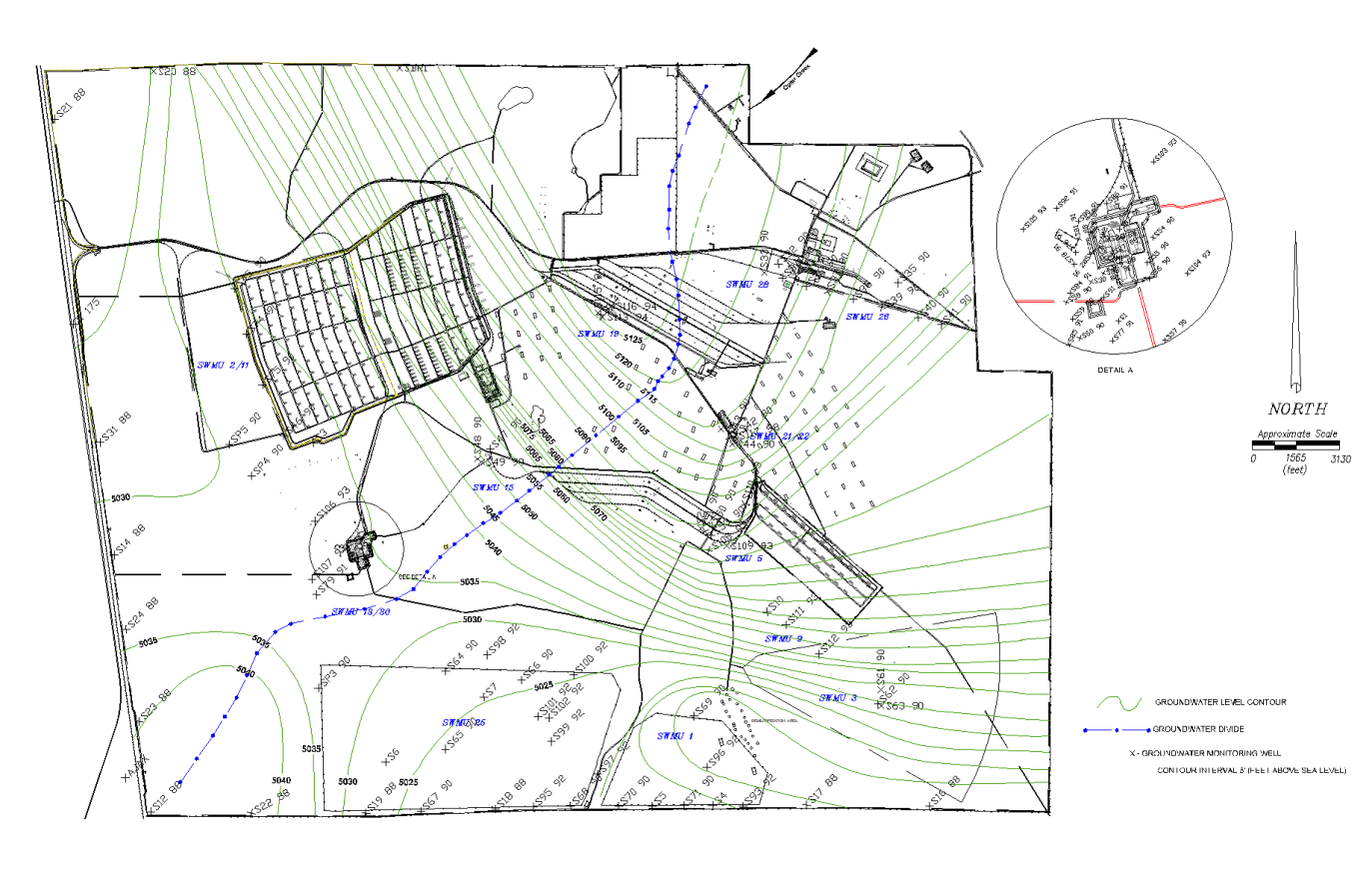
- Evaluate Presence or Absence of Contamination
- Recommend NFA, Interim Action, and/or Additional Investigation

RCRA Facility Investigation Phase 2 – Beginning in 2004

- Evaluate the Nature and Extent of Environmental Contamination
- Quantify Human and Environmental Health Risks
- Support Corrective Action Alternatives

Site Background

Groundwater Elevation Contour Map



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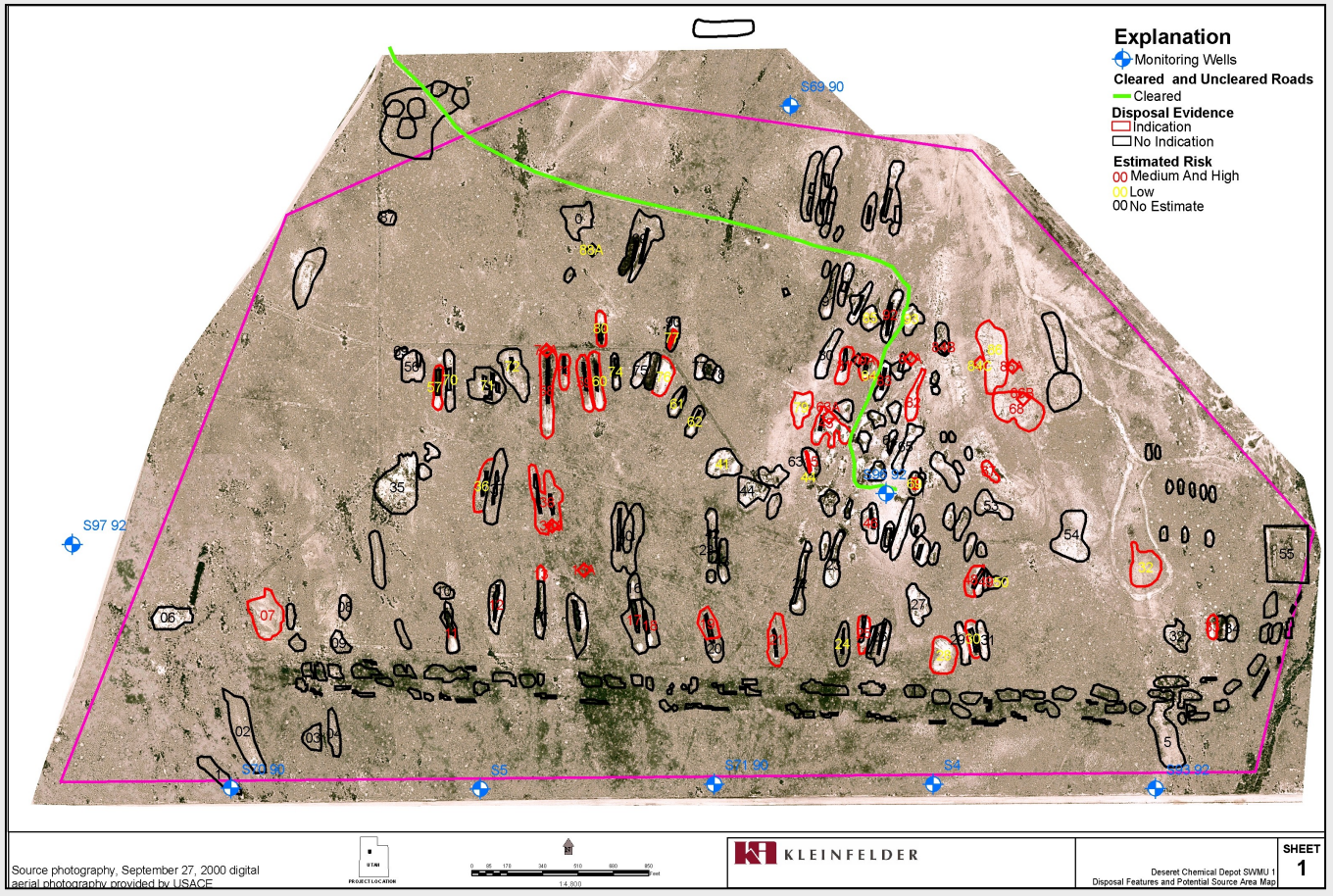
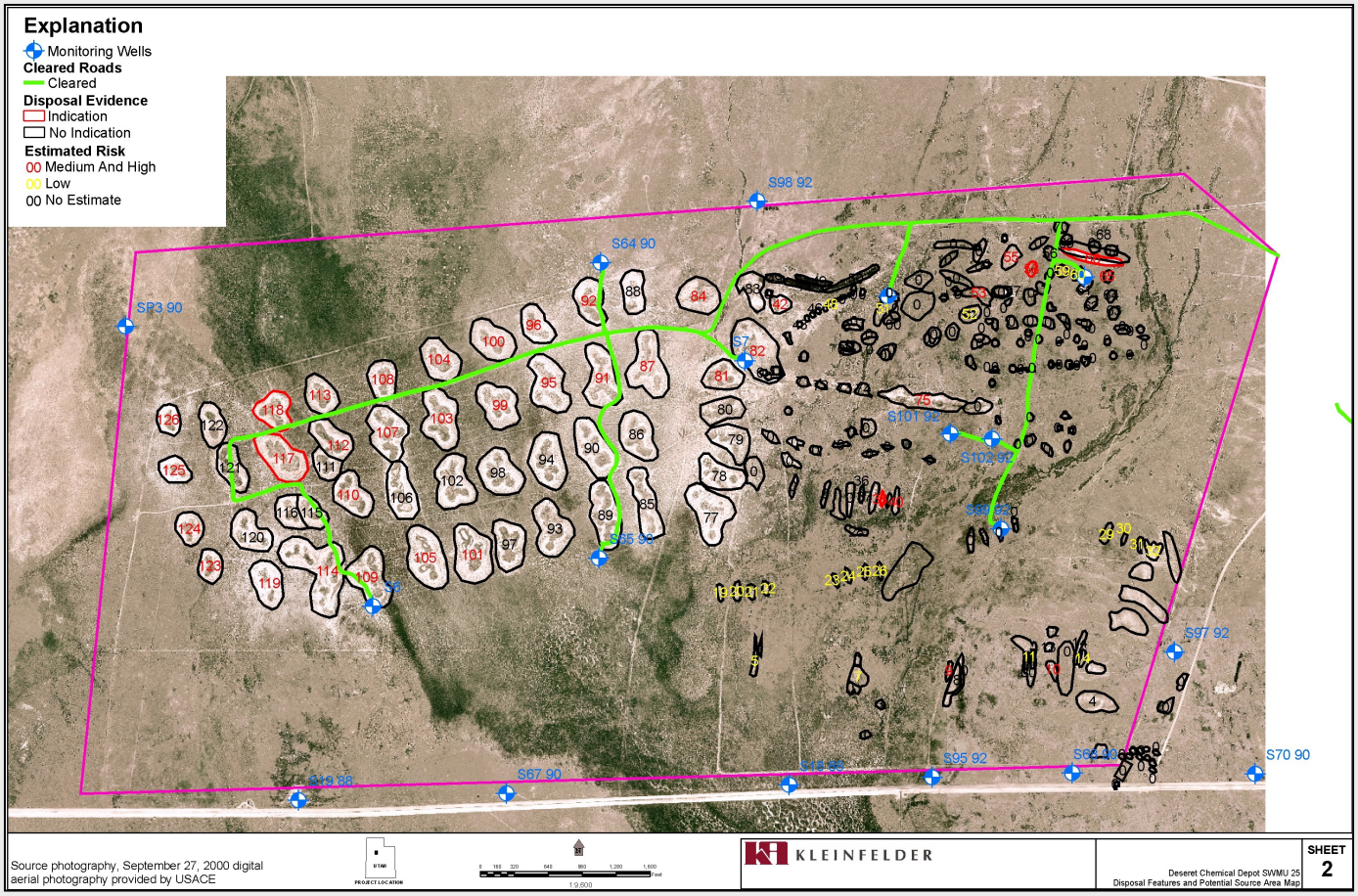
>EXPECT MORE

SWMU 1 (Approximately 373 Acres)



SWMU 25 (Approximately 1100 Acres)



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>EXPECT MORE

Objective

Objective:

To characterize the nature and extent of chemical contamination, including CWM & ABP

Challenges:

Unproven technology for CWM/ABP

UXO and Chemical Hazards in field

Physics – some primary breakdown products are unlikely to be persistent in environment

Special Challenges

- Unexploded Ordnance Avoidance
- Chemical Warfare Materials
- Non-intrusive or Remote-Controlled Sampling Methods Required
- Range of Potential Contaminants
- Multiple Potential Sources
- Large Area to Investigate

Technical Approach

- Develop Accurate Aerial Photographic – Based Site Maps
- Evaluate Characterization Technologies – Method Detection Limit Studies
- Select Most Sensitive, Safe, and Cost-Effective Method for Implementation

Technical Approach
(continued)

- Clear roadways for access to features (Parsons)
- Sample around Burial Pits and Trenches
- Collect multiple samples from each feature
- Prepare a Site Characterization Report of the results

EMFLUX Passive Soil Gas Samplers

Advantages of the EMFLUX System

- Easily transported
- Can be used on sites with limited access
- No power equipment require
- Minimal handling concerns
- No waste from soil cuttings
- Non-invasive
- Cost Effective

Sampler Deployment

EMFLUX® Field Kit and Surface Flux Chamber Installation

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What's Next?

Steps Going Forward:

- Complete the UXO access clearance
- Finalize the Work Plans and Health and Safety Plans
- Field sampling
- Date reduction and reporting

QUESTIONS ?